

S128134



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

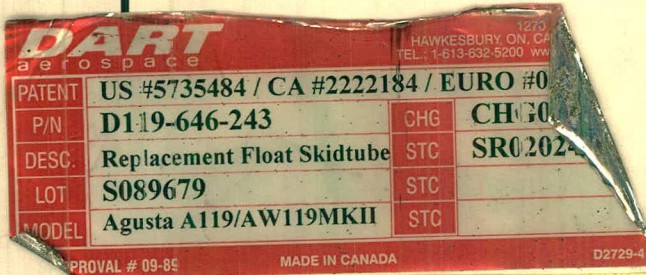
Tel (613) 632-5200
Fax 613 632-5246

D119-646-243-RWRA480**Job Sheet 187399****Part No:** D119-646-243-RWRA480**Job Qty:** 1 ea**Part Name:** AW119 Repl. Skidtube with Heavy Duty Wearplates, Float Compatible -Fits LH or RH**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 12/4/18**Job Tracking No:****Due Date:** 12/21/18**Created By:** Jesse White**Type:** SOLD**Description:****Note:** DWG D3905 Rev.F IPP Rev. A 18.12.03 New issue DP Verify DD**Ship Via:****Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Handfinish - 4 - Assembly	1		12/21/18	0.00	1.00	Handfinish - 4 - 1		HL 18-12-05
		pcs					Handfinish - 4 - 10		
							Handfinish - 4 - 11		
							Handfinish - 4 - 12		
							Handfinish - 4 - 13		
							Handfinish - 4 - 14		
							Handfinish - 4 - 15		
							Handfinish - 4 - 2		
							Handfinish - 4 - 3		
							Handfinish - 4 - 4		
							Handfinish - 4 - 5		M.B. 18-12-05
							Handfinish - 4 - 6		
							Handfinish - 4 - 7		
							Handfinish - 4 - 8		
							Handfinish - 4 - 9		
110	Skidtubes	1		12/21/18	0.00	2.50	Skidtubes - 1 - B4B		
		pcs							
120	QC 5	1		12/21/18	0.00	0.00	QC 5 - 10		
		pcs					QC 5 - 12		
							QC 5 - 16		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 38		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		



1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S134705**Part:** D119-646-243**Job No:** 187399**Serial No/Batch:** S134705**Revision:** D,F**Inspector:****Exp Date:****Instructions:** FA/ STC SR02024SE 15/10/28 TC STC LoA P-09-0407-RDIMS-

D119-646-243-RWRA480

Job # 187399

Plex 12/4/18 8:21 AM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☒

NCR No. _____

DISPOSITION

Rework ☒
Scrap ☐
Use-as-is ☐

DEPARTMENT/PROCESS

Skid-tube ☒
Machining ☐
Large Fab ☐

Cross tube ☐
Small Fab ☐
Finishing ☐

Eng. (Non-AW) ☐
Prod. Eng. Coord. ☐
Rec/Store/Packaging ☐

Engineering ☐
Water Jet ☐
Supplier ☐
Quality ☐

Job: _____
Part No. _____

Date: 18/12/5

Sequence #: 110

QTY Affected: 1

MRB (QS1042)

INSP
12 9/14/25

Description Work Order Deviation

Disposition

Completed By

meals

Lead hand / Supervisor

JW
18/12/05

QC / QA Coordinator

Qty (2) holes for attaching D5372-1 were damaged. Spacers were drilled out and $\phi 0.313$ hole was maintained per dwg.

Acceptable to drill out damaged spacers and re-install qty (2) D3681-1 spacers per Figure E-E of dwg D3905 Rev. F.

Reworked to match dwg, no deviation, is Acceptable.

Root Cause

Operator ☐
Manufacturing Process ☐
Equip/Tooling ☐
Handling/Preservation ☐
Material ☐
Product Improvement ☐
Process Improvement ☐
Human Factors ☐

☐ Pressure/Forced
☐ Bending
☐ Crushing
☐ Cracks
☐ Crimp/Kink/Ripple/Wave/Twist
☐ Marks/Chatter
☐ Mislabeled

FAULT CATEGORY

☐ Contamination
☐ Misaligned/off center
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Incomplete/Unclear Instructions
☐ Drill Holes
☐ Fit/Function

☐ Power Loss/Surge
☐ Folio/Program
☐ Grain Direction
☐ Weld
☐ Wrong Stock Pulled
☐ Out of Sequence
☐ Off-set/Set-up

☐ Positioned Wrong
☐ Outside Tolerance
☐ Drawing
☐ Finish
☐ Part Lost/Missing
☐ Misread

Other/Details:

			QC 5 - 58	DAS
			QC 5 - 68	DEC 05 2018 68
			QC 5 - 9	9-89
			QC 5 - 50	
			QC 5 - 30	
130	Conventional Lathe - 1 - B4B	1 pcs	12/21/18	0.00 0.10
			Conventional Lathe - 1 - B4B	
			Conventional Lathe - 2 - B4B	
140	QC 2	1 pcs	12/21/18	0.00 0.00
			QC 2 - 1	
			QC 2 - 12	
			QC 2 - 14	
			QC 2 - 16	
			QC 2 - 17	
			QC 2 - 19	
			QC 2 - 2	
			QC 2 - 20	
			QC 2 - 22	
			QC 2 - 23	
			QC 2 - 25	
			QC 2 - 32	
			QC 2 - 33	
			QC 2 - 35	
			QC 2 - 38	
			QC 2 - 39	
			QC 2 - 4	
			QC 2 - 40	
			QC 2 - 44	
			QC 2 - 45	
			QC 2 - 48	
			QC 2 - 49	
			QC 2 - 50	
			QC 2 - 51	
			QC 2 - 52	
			QC 2 - 54	
			QC 2 - 56	
			QC 2 - 57	
			QC 2 - 62	
			QC 2 - 63	
			QC 2 - 8	
150	QC 8	1 pcs	12/21/18	0.00 0.00
			QC 8 - 12	
			QC 8 - 14	
			QC 8 - 16	
			QC 8 - 17	
			QC 8 - 20	
			QC 8 - 25	
			QC 8 - 3	
			QC 8 - 32	
			QC 8 - 33	
			QC 8 - 35	
			QC 8 - 38	
			QC 8 - 39	
			QC 8 - 4	
			QC 8 - 44	
			QC 8 - 45	
			QC 8 - 49	
			QC 8 - 58	
			QC 8 - 8	
			QC 8 - 9	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																															
Date : _____		Sequence #: _____		QTY Affected : _____		MRB (QSI042)																													
Description Work Order Deviation				Disposition																															
				Completed By																															
				Lead hand / Supervisor																															
				QC / QA Coordinator																															
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"><tr><td>☐ Pressure/Forced</td><td>☐ Contamination</td><td>☐ Power Loss/Surge</td><td>☐ Positioned Wrong</td></tr><tr><td>☐ Bending</td><td>☐ Misaligned/off center</td><td>☐ Folio/Program</td><td>☐ Outside Tolerance</td></tr><tr><td>☐ Crushing</td><td>☐ BOM/Route</td><td>☐ Grain Direction</td><td>☐ Drawing</td></tr><tr><td>☐ Cracks</td><td>☐ Broken/Damage/Defect</td><td>☐ Weld</td><td>☐ Finish</td></tr><tr><td>☐ Crimp/Kink/Ripple/Wave/Twist</td><td>☐ Incomplete/Unclear Instructions</td><td>☐ Wrong Stock Pulled</td><td>☐ Part Lost/Missing</td></tr><tr><td>☐ Marks/Chatter</td><td>☐ Drill Holes</td><td>☐ Out of Sequence</td><td>☐ Misread</td></tr><tr><td>☐ Mislabeled</td><td>☐ Fit/Function</td><td>☐ Off-set/Set-up</td><td></td></tr></table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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		Other/Details: _____																																	

				QC 8 - 68	
				QC 8 - 67	
160 Skidtubes - 2 - B4B	1 pcs	12/21/18	0.00 0.00	Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	
				Skidtubes - 5 - B4B	BE
170 QC 5	1 pcs	12/21/18	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 16	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 38	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	PD 18-12-06
				QC 5 - 50	
				QC 5 - 30	
180 QC 10	1 pcs	12/21/18	0.00 0.00	QC 10 - 10	
				QC 10 - 16	
				QC 10 - 18	
				QC 10 - 24	
				QC 10 - 38	
				QC 10 - 43	
				QC 10 - 50	
				QC 10 - 58	
				QC 10 - 9	PD 18-12-06
190 Spray Paint - 2 - B4B	1 pcs	12/21/18	0.00 1.00	Spray Paint - 1 - B4B	AI 18-12-12
				Spray Paint - 2 - B4B	
				Spray Paint - 3 - B4B	
				Spray Paint - 4 - B4B	
200 QC 14	1 pcs	12/21/18	0.00 0.00	QC 14 - 15	
				QC 14 - 16	
				QC 14 - 2	
				QC 14 - 34	DAS
				QC 14 - 38	38
				QC 14 - 41	9-89
				QC 14 - 51	
				QC 14 - 58	
				QC 14 - 59	
				QC 14 - 9	
210 Handfinish - 4-1-Assembly-B4B	1 pcs	12/21/18	0.00 1.00	QC 14 - 68	
				Handfinish - 4 - 1 - B4B	AI 18-12-12
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. _____

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

220 QC 5	1 pcs	12/21/18	0.00 0.00	Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
				QC 5 - 10	
				QC 5 - 12	
				QC 5 - 16	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 38	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
288 DC	1 pcs	12/21/18	0.00 0.00	QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	DAS DEC 21 2018 68
				QC 5 - 9	9-89
				QC 5 - 50	
				QC 5 - 30	
				DC - 1 - B4B	DAS 21
				Packaging 3 - 1 - B4B	9-89
				Packaging 3 - 2 - B4B	DEC 21 2018
				Packaging 3 - 3 - B4B	DEC 21 2018
290 Packaging 3-1 - Stock - B4B	1 pcs	12/21/18	0.00 0.00	Packaging 3 - 4 - B4B	DAS 21
				Packaging 3 - 5 - B4B	9-89
				Packaging 3 - 6 - B4B	9-89
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																															
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Other/Details: _____																																			

				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
300 QC21-FG	1 Ea	12/21/18	0.00 0.00	QC 21 - FG - 16	

Part Op **100** - 1-Pull D119-646-243 SO89679/S128134 2-Disassemble as per RA480
 Descriptions: **110** - Drill out damaged cross bolt spacers as per RA480 and drawing D3905.
120 - Inspect completeness. Custom cross bolt spacer size to be determined by engineering. See PEC's to add appropriate material to bill of material.
130 - Fabricate custom cross bolt spacers as per engineering.
160 - 1-Weld custom cross bolt and grind flush. AR 138673 2-Touch up ALODINE. All to be done as per RA480
210 - Using new hardware re-assemble and touch up wing walk as per RA480.
288 - Document Control Photocopy bluefile & type labels per PPP D119-646-243 CHG 006
290 - Identify as per dwg & Stock Location: _____
300 - QC21- Final Inspection - Work Order Release

DEC 21 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D119-646-243	AW119 Repl. Skidtube with Heavy Duty Wearplates, Float Compatible -Fits LH or RH	1 Ea (1 ea)	100-Handfinish - 4 - Assembly	5089679
AN3C46A	Bolt	4 Ea (4 ea)	210-Handfinish - 4-1- Assembly-B4B	5095399
AN3C46A	Bolt	4 Ea (4 ea)	210-Handfinish - 4-1- Assembly-B4B	5095437
AN3C5A	Bolt	2 Ea (2 ea)	210-Handfinish - 4-1- Assembly-B4B	5130139
AN960C10L	Washer (SEE PART NAS1149C0332R)	4 (4 ea)	210-Handfinish - 4-1- Assembly-B4B	5122721
D2652	Bushing	8 Ea (8 ea)	210-Handfinish - 4-1- Assembly-B4B	5117447
D3411-3	Washer	8 Ea (8 ea)	210-Handfinish - 4-1- Assembly-B4B	51641009
D3672-1	Washer, Phenolic	2 Ea (2 ea)	210-Handfinish - 4-1- Assembly-B4B	5105379
D3904-1	Washer	8 Ea (8 ea)	210-Handfinish - 4-1- Assembly-B4B	5083543
MS21043-3	Nut	4 Ea (4 ea)	210-Handfinish - 4-1- Assembly-B4B	5083547
MS21043-3	Nut	4 Ea (4 ea)	210-Handfinish - 4-1- Assembly-B4B	
NAS1149C0332R	Washer	2 Ea (2 ea)	210-Handfinish - 4-1- Assembly-B4B	5130139

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Handfinish - 4 - Assembly	D119-646-243	1	0	0
210-Handfinish - 4-1-Assembly-B4B	AN3C46A	8	103	0
	AN3C5A	2	1,492	0
	AN960C10L	4	0	0
	D2652	8	353	0
	D3411-3	8	42	0
	D3672-1	2	1,403	0
	D3904-1	8	56	0
	MS21043-3	8	866	0
	NAS1149C0332R	2	3,437	0

Part Specifications

Specifications could not be found.

Plex 12/4/18 8:21 AM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ s tube ☐ Machin ☐ Fab ☐ Lar ☐ Rec/Store/Packaging ☐ Eng. (Non-AW) ☐ Engineering ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Rec/Store/Packaging ☐ Supplier ☐ Quality ☐	
Date : _____		Sequence #: _____		MRB (QSI042)	
Description Work Order Deviation				Completed By	
2+ 3681-1 \$116457				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		CATEGORY ☐ Pressure/Force ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____ ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			

Inspection Sheet Complete **RA480 (Hawkesbury)**

Customer QA Ref #

n/a

Part Number	Original Batch / Serial # / Ctrl #	Original Revision #	Quantity	Part Complete	Rev/CHG Current	New Paperwork	New Labels	Disposition	Original Container #	New (Receiving) Serial #	New Job #	Work order instructions
D119-646-243	S089679		1	☐ Yes	☐ Yes	☐ Yes	☐ Yes	CUSTOMER SUPPLIED	S089679	S128134		Customer supplier D119-646-243 S089679 CHG005 Rework as follow to repair holes for skidtube protector kit that was drilled by customer. • Remove wearplate D3849-045 and scrap hardware (tag D3849-045 with RA#, will be re install). • Remove lug D3886-041 qty2 and scrap hardware (tag D3886-041 with RA#, will be re install). • Remove cap D2855-3 and scrap hardware (tag D2855-3 with RA#, will be re install). • Drill out remaining of crossbolt and open holes as per drawing D3905.**note that one hole was already open by customer and measure .315", if other side of hole doesn't match up custom crossbolt will need to be make and approve by engineering and record on the work order, custom crossbolt dimension to be determined by engineering**. • Weld qty2 crossbolt D3681 and grind. • Touch up Alodine • Paint and prime rework area. • Wing walk if necessary. • Assemble using original wearplate and aft cap with new hardware. • ID tube as repair using original serial number, and return to customer.
0			0	☐ Yes	☐ Yes	☐ Yes	☐ Yes					
0			0	☐ Yes	☐ Yes	☐ Yes	☐ Yes					
0			0	☐ Yes	☐ Yes	☐ Yes	☐ Yes					
0			0	☐ Yes	☐ Yes	☐ Yes	☐ Yes					
0			0	☐ Yes	☐ Yes	☐ Yes	☐ Yes					

QC Approval: P.D.

Date: 24-Nov-18

Special Return/Rework Instructions:

Entered: _____ Date: _____

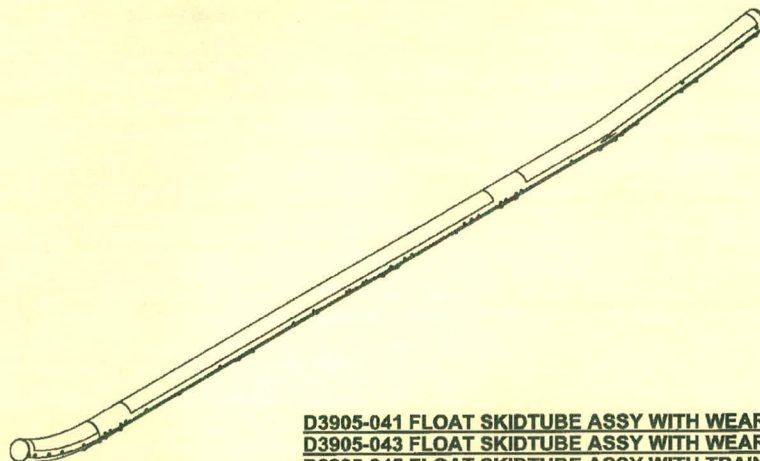


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Eng. (Non-AW) ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Water Jet ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Supplier Quality ☐</td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																								
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Root Cause <table style="width: 100%;"> <tr><td>Operator ☐</td></tr> <tr><td>Manufacturing Process ☐</td></tr> <tr><td>Equip/Tooling ☐</td></tr> <tr><td>Handling/Preservation ☐</td></tr> <tr><td>Material ☐</td></tr> <tr><td>Product Improvement ☐</td></tr> <tr><td>Process Improvement ☐</td></tr> <tr><td>Human Factors ☐</td></tr> </table>		Operator ☐	Manufacturing Process ☐	Equip/Tooling ☐	Handling/Preservation ☐	Material ☐	Product Improvement ☐	Process Improvement ☐	Human Factors ☐	FAULT CATEGORY <table style="width: 100%;"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☐ Misaligned/off center</td> <td>☐ Folio/Program</td> <td>☐ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>				☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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Other/Details:																																									



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

RELEASED

2018 OCT 19
 ECM 18-709

APPROVED

F	ADDED WASHERS FOR AFT TRAINING WEARPLATE, D3411-3 QTY 24 WAS 18, REF CAR17-205. ADDED STRUCTURAL PROVISIONS TO ALLOW FOR THE INSTALLATION OF D119-846-313/314 SKIDTUBE PROTECTOR KIT, D3492-045 QTY 24 WAS 18 ON -041/-043, ADDED D3492-045 PLUGS TO -045, D3681-1 QTY 12 WAS 8 ON -051/-053, Ø0.313 HOLE QTY 12 WAS 8 ON -11/-13, Ø0.129 HOLE QTY 23 WAS 18 ON -3, REF NCR17-6588. FLAG NOTE 10 WAS 9 ON SHT 2 & 3	ZF	18.08.16
E	COMPLETE REDRAW SEE PREVIOUS REV. AFT FLOAT HOLE NOW Ø0.465 WAS Ø0.437. FINISH REMOVED FROM SADDLE AREA SEE DETAIL F. REF PARTS-421. CHANGE QTY OF D2855-3, ADDED D2855-5 CAP ASSEMBLIES, ADDED INSTRUCTIONS TO LOCATE INSERT HOLE FOR D2855-5 CAP, REF PART17-583. ADDED DRILL JIG REF NUMBER, NCR15-5386. INCREASE RIDGE RELIEF FROM 0.060 TO 0.130, REF PART17-574	AJS / WK	17.03.13
D	REVISED DIMENSIONS AND PROVIDED TOLERANCE TO SKIDTUBE OVERALL LENGTH PAGE 6-6. REVISED NOTE 2 AND NOTE 7 PAGE 1 (ZN B8-, ZN A8-1). REVISED -041/-043/-045 DRAWING VIEWS, REVISED SECTION VIEW F-F (ZN B4-7), REVISED BOM REF, PARTS-299 AND PARTS-272	AK	14.08.08
C	(SHT 1 PL, ZN C2-2, C2-3, C2-4) ITEM 13, QTY 2 WAS 4, ITEM 42 AND 45, QTY 44 WAS 46, ADD ITEM 48, MS24694-C52 WAS AN3CSA, D3672-1 AND NAS1149C0332R, (ZN C7-7) Ø0.201 CSK Ø0.385 X 1.00" WAS Ø0.204 THRU, (ZN A4-6, A4-6) ADD RELIEF INSTRUCTION, ADD ITEM 10, CROSS BOLT SPACER (ZN D4-1, C6-7, D6-7)	DB	13.02.21
B	REVISED PART LIST, ALS4-1032-130 WAS AELS-1032-130 (ZN A6-5, A6-6, C5-7, C5-7, A5-7); ADD DT8932 (ZN A8-1); D2855-3 WAS D2575 (ZN C8-2, C1-2, C8-3, C1-3, C8-4, C1-4); AN3CSA WAS AN3C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4); D3849-047 WAS D3849-041 (ZN B3-4); ADD D3411-3 (ZN B3-4); ADD AN3C50A (ZN B3-4); Ø0.313 WAS Ø0.328 (B2-5, B2-6, C2-7, A5-7 & D7-8), REVISED NOTE 14 (ZN A8-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 1 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	D8	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	18.08.16	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.	

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WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

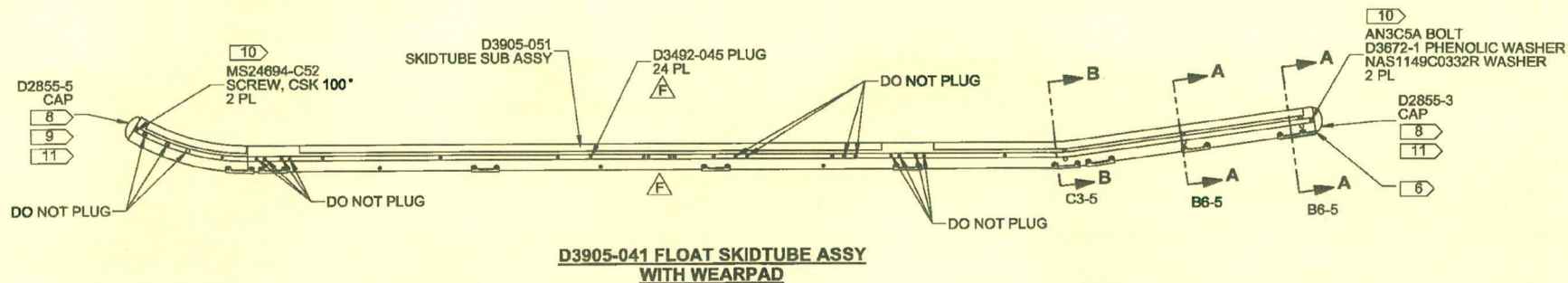
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3905-041	SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3492-045	PLUG
4	2	D3672-1	PHENOLIC WASHER
5	8	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3905-051	SKIDTUBE SUB ASSEMBLY
8	2	D5101-041	CROSSBOLT SPACER ASSY
9	1	D5101-047	CROSSBOLT SPACER ASSY
10	6	D5101-3	INSERT
11	6	D5101-5	INSERT

ITEM	QTY -041	P/N	DESCRIPTION
12	1	ALS4-1032-225	INSERT
13	6	AN3C4A	BOLT
14	38	AN3C5A	BOLT
15	3	AN4C46A	BOLT
16	3	MS21043-4	NUT, SELF-LOCKING
17	2	MS24694-C52	SCREW, CSK 100°
18	44	NAS1149C0332R	WASHER
19	6	NAS1149C0416R	WASHER



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-041" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 35.4 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-051 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 2 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	18.08.16	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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2018 OCT 19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

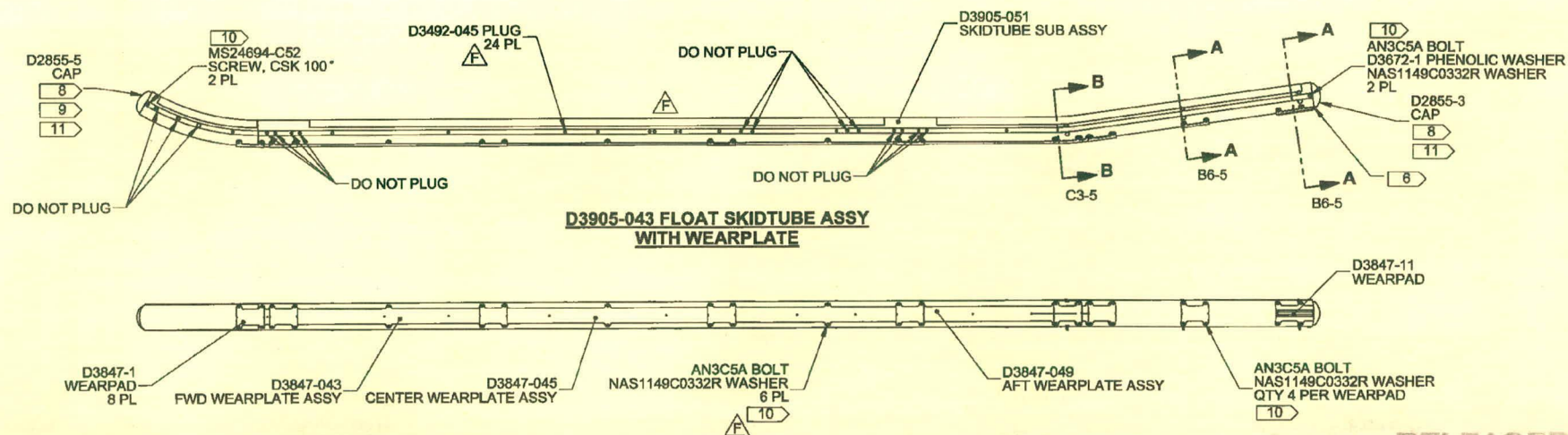
NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																															
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☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up																																	
		Other/Details: _____																																	

ITEM	QTY -043	P/N	DESCRIPTION
	X	D3905-043	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3492-045	PLUG
4	2	D3672-1	PHENOLIC WASHER
5	1	D3847-043	FWD WEARPLATE ASSY
6	1	D3847-045	CENTER WEARPLATE ASSY
7	1	D3847-049	AFT WEARPLATE ASSY
8	8	D3847-1	WEARPAD
9	1	D3847-11	WEARPAD
10	1	D3905-051	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSSBOLT SPACER ASSY
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY -043	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	44	AN3C5A	BOLT
17	3	AN4C46A	BOLT
18	3	MS21043-4	NUT, SELF-LOCKING
19	2	MS24694-C52	SCREW, CSK 100°
20	44	NAS1149C0332R	WASHER
21	6	NAS1149C0416R	WASHER



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-043" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 42.8 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-051 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

APPROVED

DESIGN	AJS
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.08.16

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO.	REV. F
D3905	SHEET 3 OF 14
TITLE	SCALE
A119 FLOAT SKIDTUBE ASSY	NTS

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2018 OCT 19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

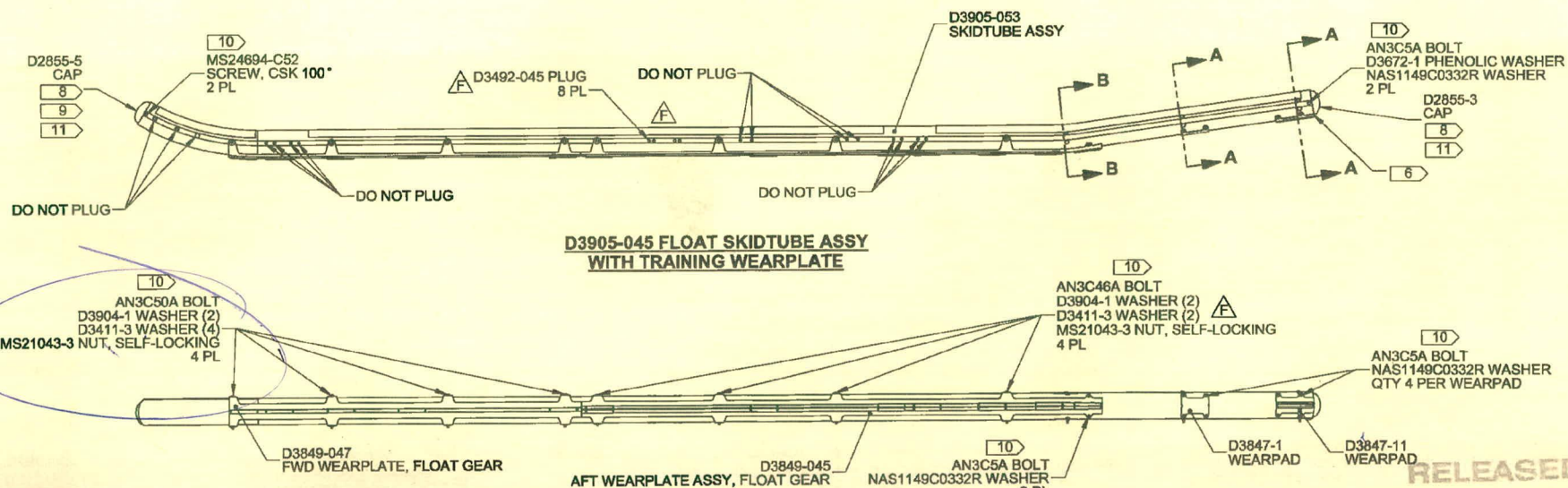
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -045	P/N	DESCRIPTION
	X	D3905-045	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3411-3	WASHER
4	2	D3872-1	PHENOLIC WASHER
5	1	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
8	1	D3849-047	FWD WEARPLATE, FLOAT GEAR
9	16	D3904-1	WASHER
10	1	D3905-053	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSS BOLT SPACER
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY -045	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	12	AN3C5A	BOLT
17	4	AN3C46A	BOLT
18	4	AN3C50A	BOLT
19	3	AN4C46A	BOLT
20	8	MS21043-3	NUT, SELF-LOCKING
21	3	MS21043-4	NUT, SELF-LOCKING
22	2	MS24694-C52	SCREW, CSK 100°
15	12	NAS1149C0332R	WASHER
24	6	NAS1149D0416J	WASHER
25	8	D3492-045	PLUG



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-045" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 48.0 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-053 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

APPROVED

DESIGN	AJS
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.08.16

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO.	D3905
TITLE	A119 FLOAT SKIDTUBE ASSY
REV. F	SHEET 4 OF 14
SCALE	NTS

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2018 OCT 19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

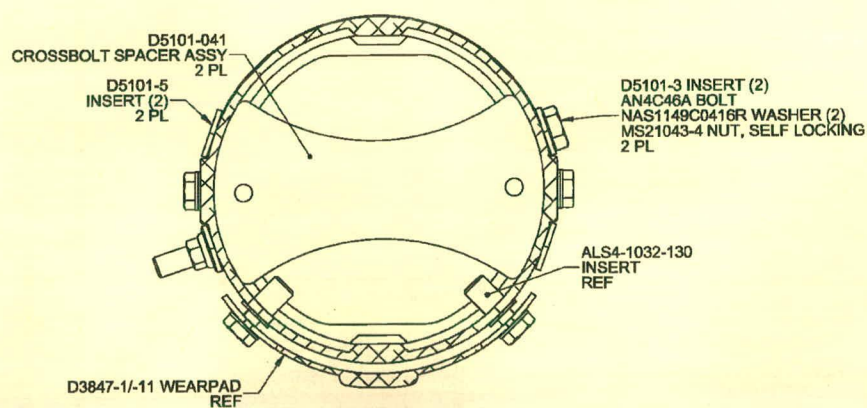
NCR No. _____

Route update only ☐

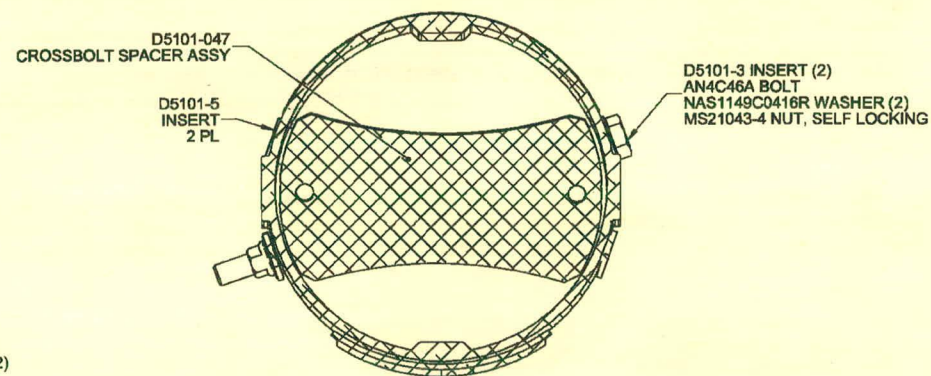
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					

8 7 6 5 4 3 2 1

D
C
B
A



SECTION A-A
SCALE: 12X



SECTION B-B
SCALE 12X

RELEASED
2018 OCT 19

APPROVED	DESIGN	AJS	DART AEROSPACE USA, INC.	
	DRAWN	ZF	EUGENE, OR	
	CHECKED	MW	DRAWING NO.	REV. F
	MFG. APPR.	DD	D3905	SHEET 5 OF 14
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY NTS	
	DATE	18.08.16	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

Entered: _____ Date: _____



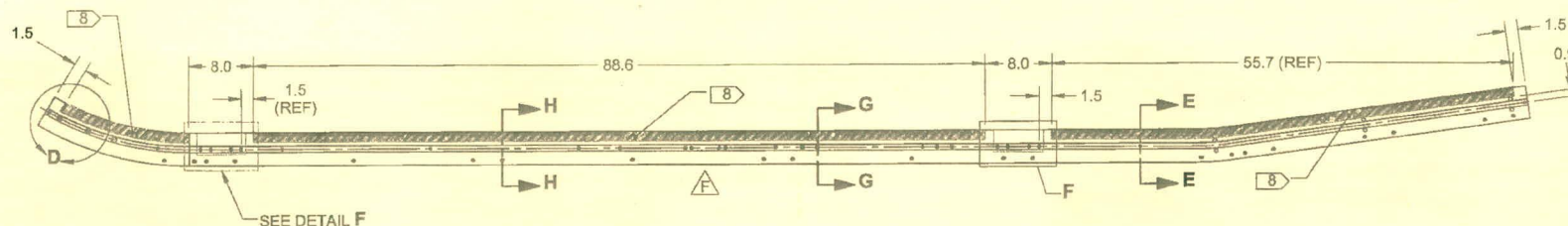
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____ 					

ITEM	QTY -051	P/N	DESCRIPTION
	X	D3905-051	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	12	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-061	SKIDTUBE SUB ASSEMBLY
5	42	ALS4-1032-130	INSERT



D3905-051 SKIDTUBE SUB ASSEMBLY

RELEASED

2018 OCT 1 9 40

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 6 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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Entered: _____ Date: _____



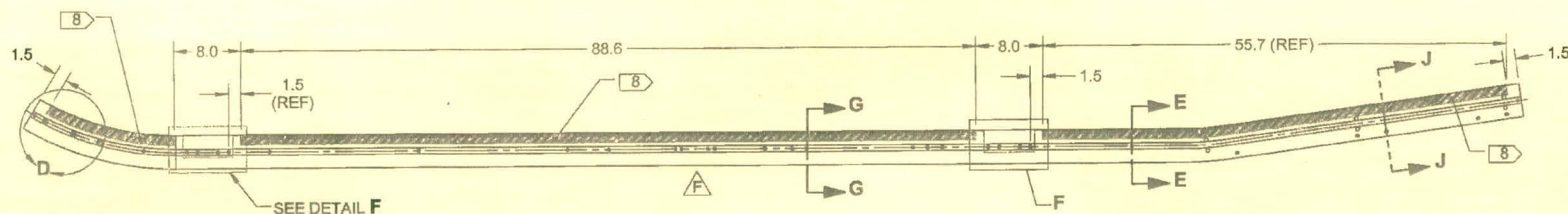
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -053	P/N	DESCRIPTION
	X	D3905-053	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	12	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-063	SKIDTUBE SUB ASSEMBLY
5	10	ALS4-1032-130	INSERT



D3905-053 SKIDTUBE SUB ASSEMBLY

RELEASED
2018 OCT 19 4

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

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DESIGN	AJS	DART AEROSPACE USA, INC.	
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CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 7 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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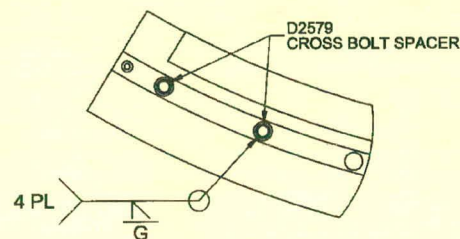
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

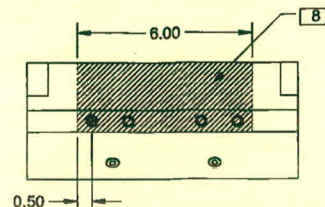
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

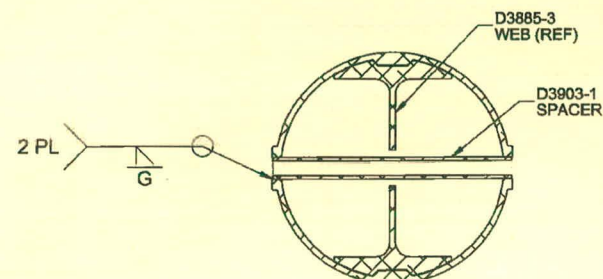
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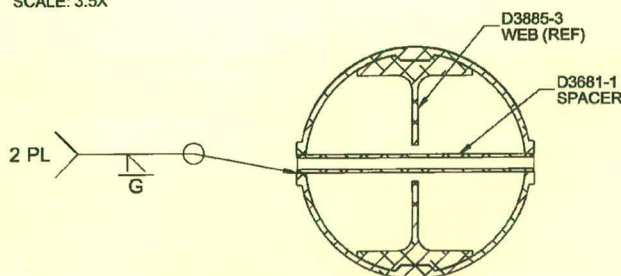
DETAIL D
SCALE: 3.5X



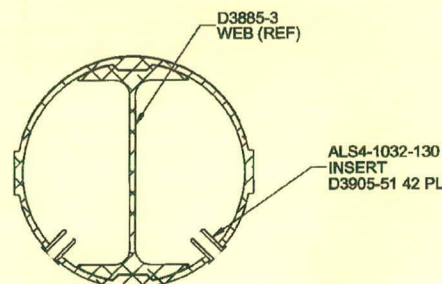
DETAIL F
SCALE: 3.5X



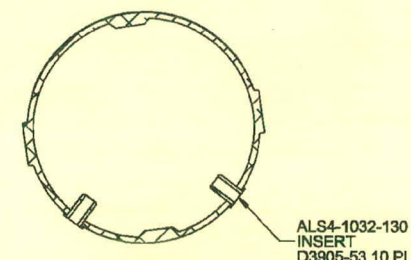
SECTION G-G
SCALE: 7X
12 PL



SECTION E-E
SCALE: 7X
12 PL



SECTION H-H
SCALE: 7X
D3905-51 21 PL



SECTION J-J
SCALE: 7X
D3905-53 5 PL

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) MASK THIS AREA AND DO NOT APPLY PRIMER OR PAINT
- 9) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION G-G $\phi 0.375$ HOLES ONLY:
 - i) CHAMFER HOLES $\phi 0.475 \times 45^\circ$
 - ii) INSERT D3903-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) C'BORE TO $\phi 0.313 \times 0.75$ DEEP
 - v) DEBURR HOLES
- 10) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION E-E $\phi 0.313$ HOLES ONLY:
 - i) CHAMFER HOLES $\phi 0.354 \times 45^\circ$ OR 0.050 DEEP $\times 45^\circ$ (BOTH SIDES)
 - ii) INSERT D3681-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) DEBURR HOLES
- 11) WELD PER DART QSI 004

RELEASED

2018 OCT 19

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 8 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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8 7 6 5 4 3 2 1

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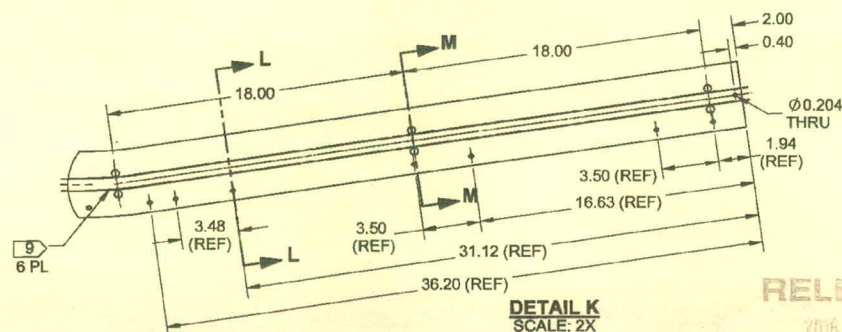
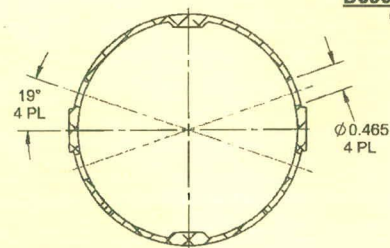
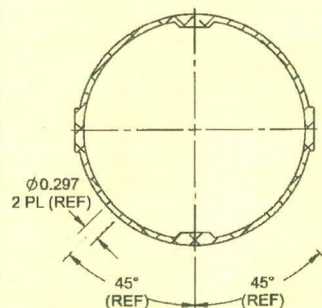
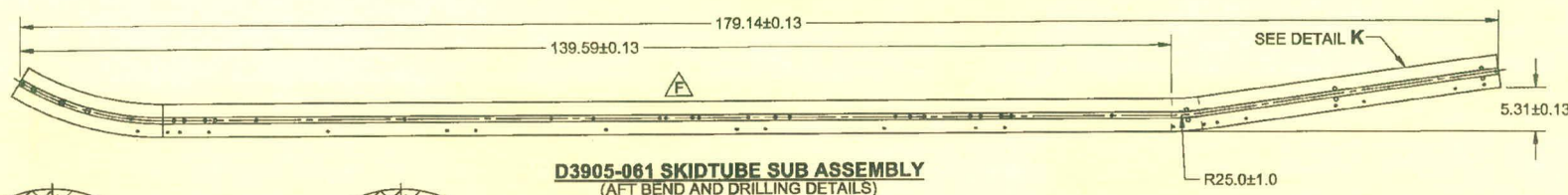
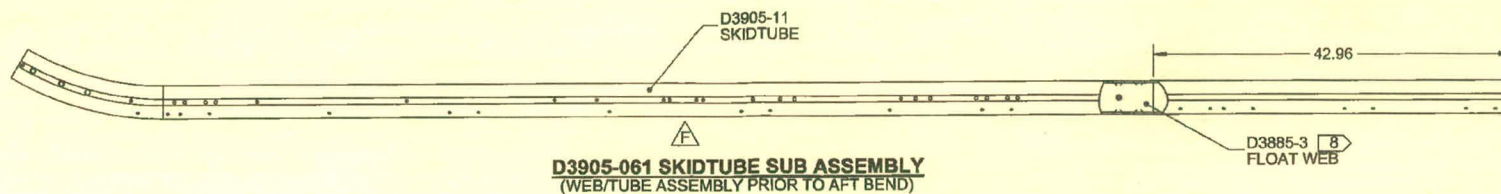
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS <table style="width: 100%;"><tr><td style="width: 15%;">Skid-tube ☐</td><td style="width: 15%;">Cross tube ☐</td><td style="width: 15%;">Eng. (Non-AW) ☐</td><td style="width: 15%;">Engineering ☐</td></tr><tr><td>Machining ☐</td><td>Small Fab ☐</td><td>Prod. Eng. Coord. ☐</td><td>Water Jet ☐</td></tr><tr><td>Large Fab ☐</td><td>Finishing ☐</td><td>Rec/Store/Packaging ☐</td><td>Supplier Quality ☐</td></tr></table>				Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																									
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Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)																																						
Description Work Order Deviation		Disposition		Completed By																																						
				Lead hand / Supervisor																																						
				QC / QA Coordinator																																						
Root Cause <table style="width: 100%;"><tr><td style="width: 50%;">Operator ☐</td><td style="width: 50%;">Pressure/Forced ☐</td></tr><tr><td>Manufacturing Process ☐</td><td>Bending ☐</td></tr><tr><td>Equip/Tooling ☐</td><td>Crushing ☐</td></tr><tr><td>Handling/Preservation ☐</td><td>Cracks ☐</td></tr><tr><td>Material ☐</td><td>Crimp/Kink/Ripple/Wave/Twist ☐</td></tr><tr><td>Product Improvement ☐</td><td>Marks/Chatter ☐</td></tr><tr><td>Process Improvement ☐</td><td>Mislabeled ☐</td></tr><tr><td>Human Factors ☐</td><td></td></tr></table>		Operator ☐	Pressure/Forced ☐	Manufacturing Process ☐	Bending ☐	Equip/Tooling ☐	Crushing ☐	Handling/Preservation ☐	Cracks ☐	Material ☐	Crimp/Kink/Ripple/Wave/Twist ☐	Product Improvement ☐	Marks/Chatter ☐	Process Improvement ☐	Mislabeled ☐	Human Factors ☐		FAULT CATEGORY <table style="width: 100%;"><tr><td style="width: 33%;">Contamination ☐</td><td style="width: 33%;">Power Loss/Surge ☐</td><td style="width: 33%;">Positioned Wrong ☐</td></tr><tr><td>Misaligned/off center ☐</td><td>Folio/Program ☐</td><td>Outside Tolerance ☐</td></tr><tr><td>BOM/Route ☐</td><td>Grain Direction ☐</td><td>Drawing ☐</td></tr><tr><td>Broken/Damage/Defect ☐</td><td>Weld ☐</td><td>Finish ☐</td></tr><tr><td>Incomplete/Unclear Instructions ☐</td><td>Wrong Stock Pulled ☐</td><td>Part Lost/Missing ☐</td></tr><tr><td>Drill Holes ☐</td><td>Out of Sequence ☐</td><td>Misread ☐</td></tr><tr><td>Fit/Function ☐</td><td>Off-set/Set-up ☐</td><td></td></tr></table>				Contamination ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Misaligned/off center ☐	Folio/Program ☐	Outside Tolerance ☐	BOM/Route ☐	Grain Direction ☐	Drawing ☐	Broken/Damage/Defect ☐	Weld ☐	Finish ☐	Incomplete/Unclear Instructions ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Drill Holes ☐	Out of Sequence ☐	Misread ☐	Fit/Function ☐	Off-set/Set-up ☐	
Operator ☐	Pressure/Forced ☐																																									
Manufacturing Process ☐	Bending ☐																																									
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Drill Holes ☐	Out of Sequence ☐	Misread ☐																																								
Fit/Function ☐	Off-set/Set-up ☐																																									
Other/Details: _____																																										

ITEM	QTY	P/N	DESCRIPTION
	X	D3905-061	SKIDTUBE SUB ASSEMBLY
1	1	D3885-3	FLOAT WEB
2	1	D3905-11	SKIDTUBE



RELEASED
2016 OCT 19 11

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING. ENSURE HOLES LINE-UP
- 9) RELIEVE RIDGE FLUSH WITH SKIDTUBE FOR INSERT CLEARANCE, MAX 0.130 INTO RIDGE

APPROVED	DESIGN	AJS	DART AEROSPACE USA, INC.	
	DRAWN	ZF	EUGENE, OR	
	CHECKED	MW	DRAWING NO:	REV. F
	MFG. APPR.	DD	D3905	SHEET 9 OF 14
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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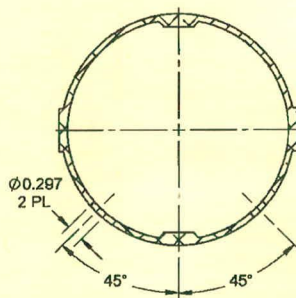
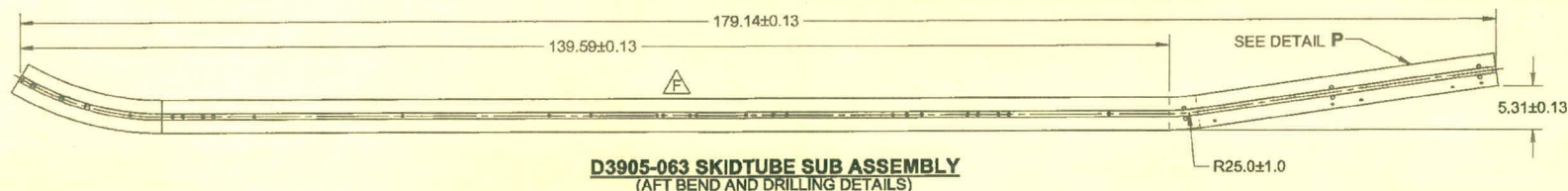
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

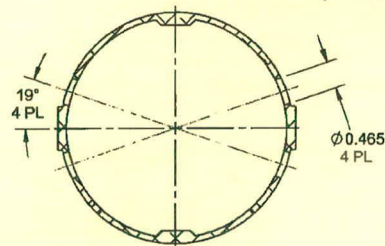
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

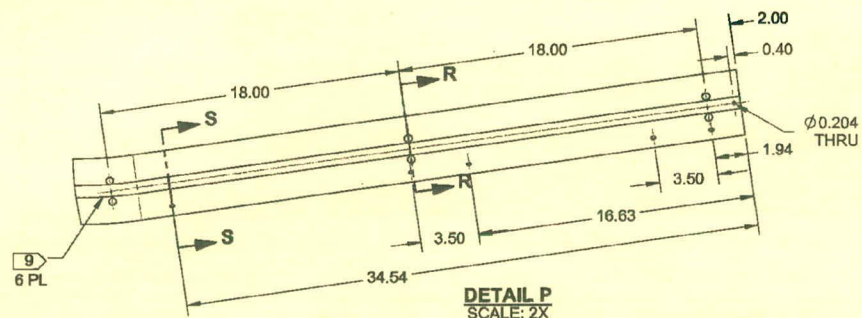
ITEM	QTY	P/N	DESCRIPTION
	X	D3905-063	SKIDTUBE SUB ASSEMBLY
1	1	D3885-3	FLOAT WEB
2	1	D3905-13	SKIDTUBE



SECTION S-S
5 PL
SCALE: 7X



SECTION R-R
3 PL
SCALE: 7X



DETAIL P
SCALE: 2X

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING. ENSURE HOLES LINE-UP
- 9) RELIEVE RIDGE FLUSH WITH SKIDTUBE FOR INSERT CLEARANCE, MAX 0.130 INTO RIDGE

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DESIGN	AJS
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DRAWING NO.	REV. F
D3905	SHEET 10 OF 14
TITLE	SCALE
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2018 OCT 13

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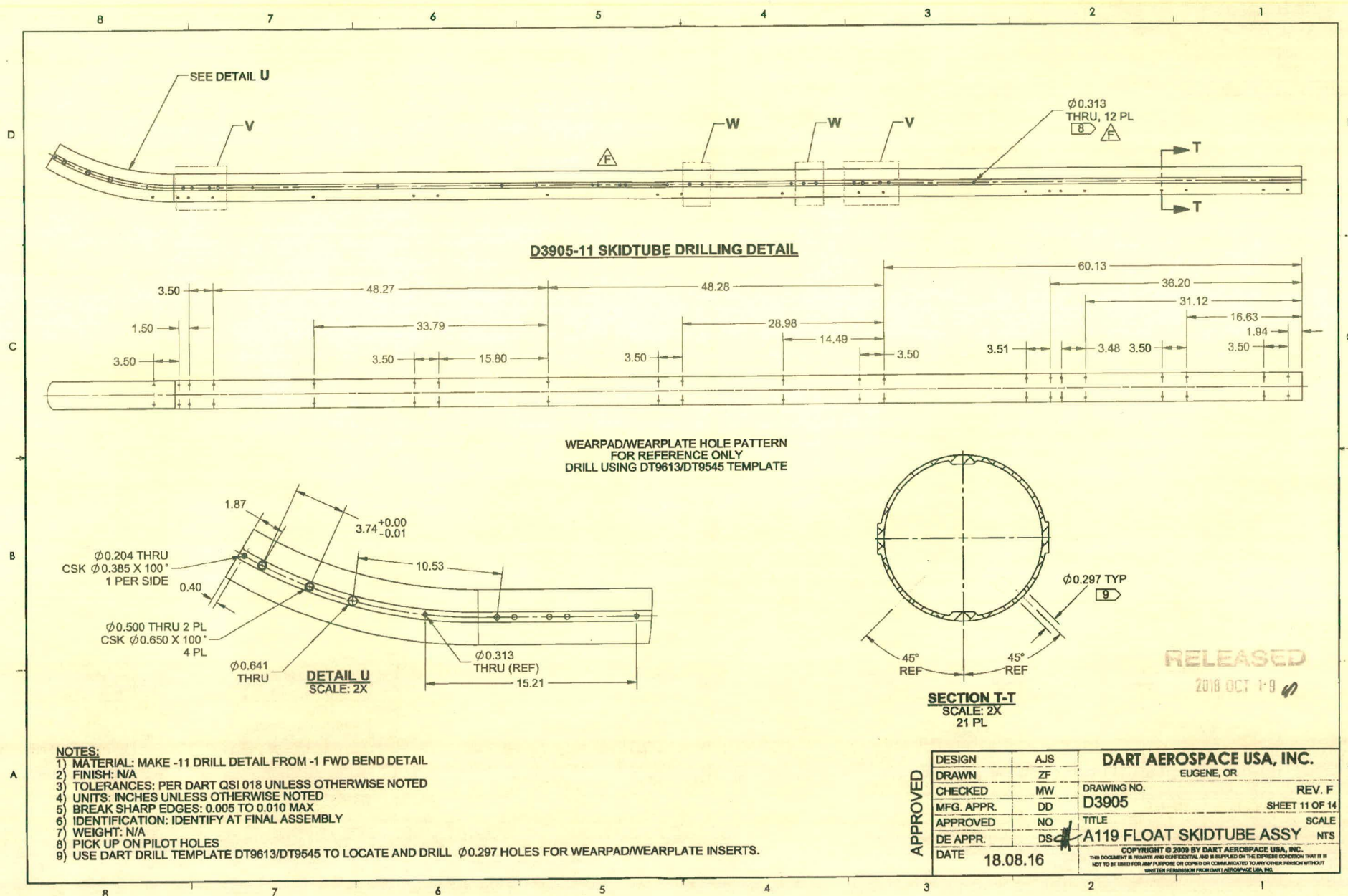


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
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				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

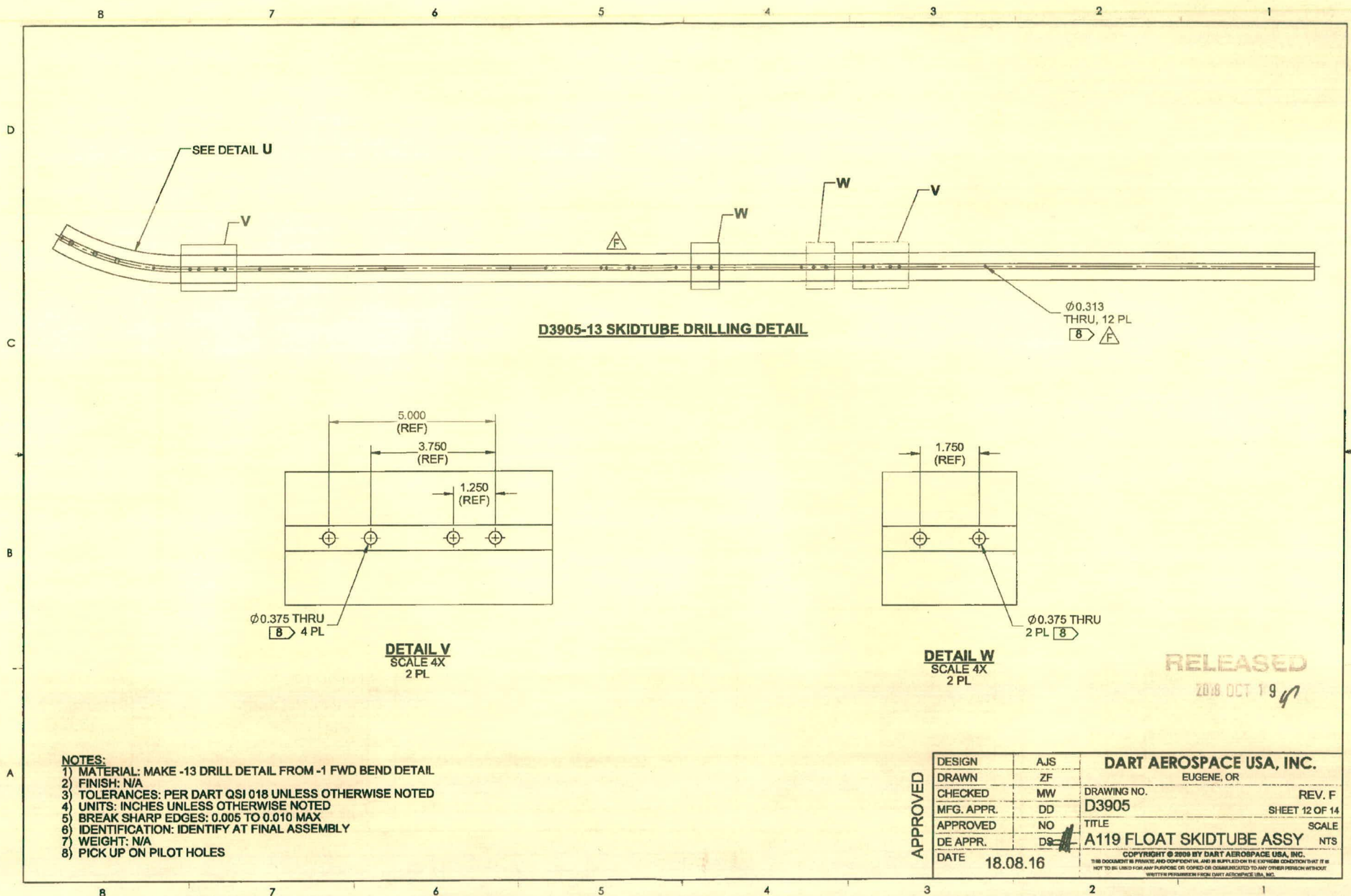


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
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Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
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Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

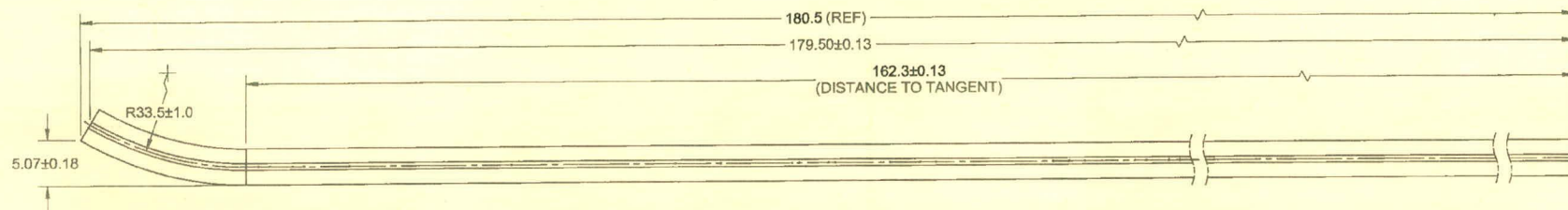


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



D3905-1 SKIDTUBE FWD BEND DETAIL

RELEASED

2018 OCT 19

NOTES:

- 1) MATERIAL: MAKE -1 FWD BEND DETAIL FROM -3 PILOT HOLE DETAIL
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

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MFG. APPR.	DD	D3905	SHEET 13 OF 14
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WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

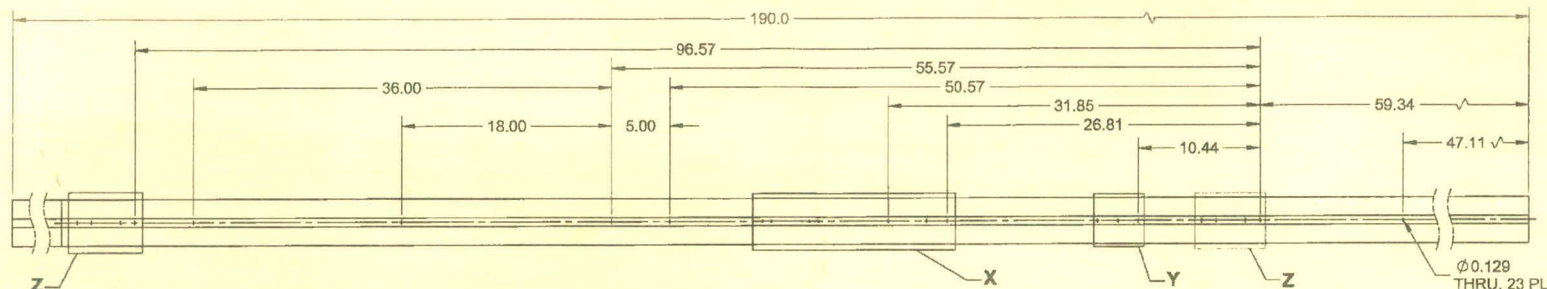
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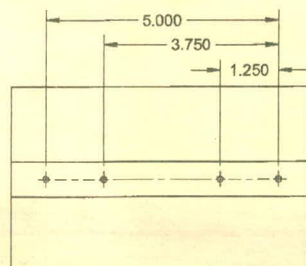
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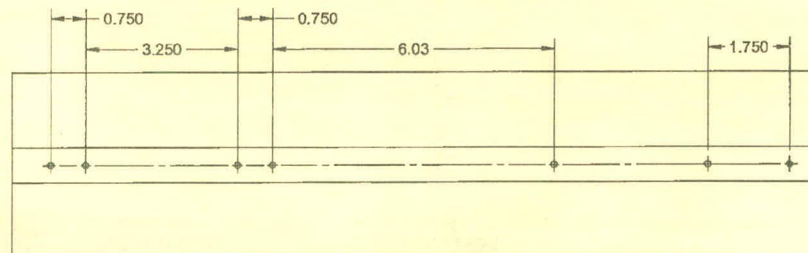
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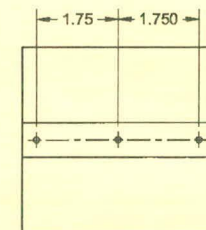
D3905-3 SKIDTUBE PILOT HOLE DETAIL



DETAIL Z
SCALE: 4X



DETAIL X
SCALE: 4X



DETAIL Y
SCALE: 4X

NOTES:

- 1) MATERIAL: MAKE FROM D2500-1-190 EXTRUSION
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A

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2018 OCT 19

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DESIGN	AJS	DART AEROSPACE USA, INC.	
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8 7 6 5 4 3 2 1

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																															
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Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"><tr><td>☐ Pressure/Forced</td><td>☐ Contamination</td><td>☐ Power Loss/Surge</td><td>☐ Positioned Wrong</td></tr><tr><td>☐ Bending</td><td>☐ Misaligned/off center</td><td>☐ Folio/Program</td><td>☐ Outside Tolerance</td></tr><tr><td>☐ Crushing</td><td>☐ BOM/Route</td><td>☐ Grain Direction</td><td>☐ Drawing</td></tr><tr><td>☐ Cracks</td><td>☐ Broken/Damage/Defect</td><td>☐ Weld</td><td>☐ Finish</td></tr><tr><td>☐ Crimp/Kink/Ripple/Wave/Twist</td><td>☐ Incomplete/Unclear Instructions</td><td>☐ Wrong Stock Pulled</td><td>☐ Part Lost/Missing</td></tr><tr><td>☐ Marks/Chatter</td><td>☐ Drill Holes</td><td>☐ Out of Sequence</td><td>☐ Misread</td></tr><tr><td>☐ Mislabeled</td><td>☐ Fit/Function</td><td>☐ Off-set/Set-up</td><td></td></tr></table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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